LAKE HAVASU CITY, ARIZONA
BOOSTER STATION 1C REPLACEMENT

PROJECT NO. WT7440

OCTOBER 2018

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LAKE HAVASU CITY

PREPARED BY:

ATKINS

PROJECT NO. 100054178

VOLUME II

CITY COUNCIL

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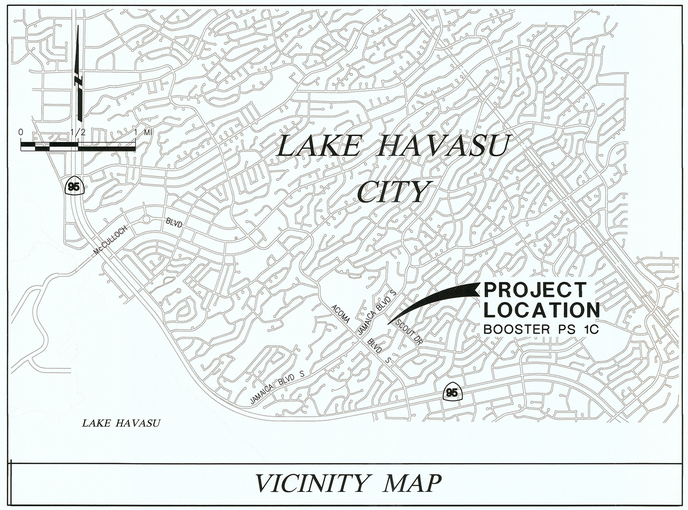
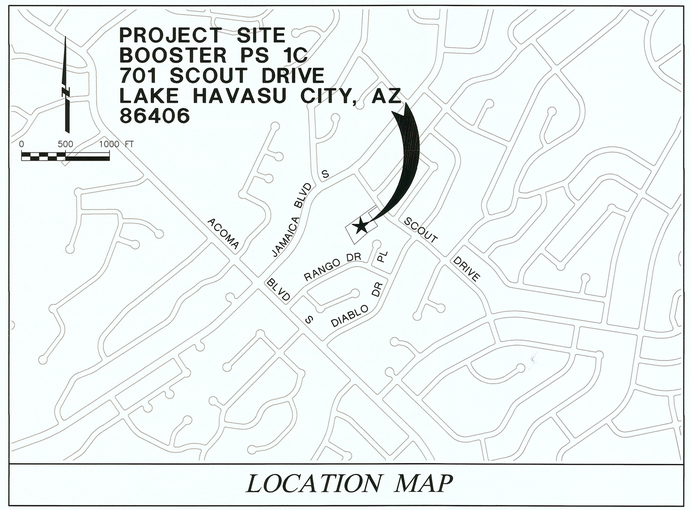
APPROVALS

ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY _____ DATE



VICINITY MAP



LOCATION MAP

REVISIONS:

ORIGINAL SCALE: 0 1 INCHES 2 3 4

LAKE HAVASU CITY

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TITLE, DRAWING INDEX, VICINITY & LOCATION MAPS

PROJECT: BOOSTER STATION 1C REPLACEMENT
LAKE HAVASU CITY, ARIZONA

DESIGNED BY: SBG/RAW
DRAWN BY: RAW

Registered Professional Engineering Certificate No. 42027 JONATHAN DANIEL TULL Date Signed [illegible] ARIZONA U.S.A.

EXPIRES 3–31–2020

PROJECT NO. WT7440

DWG NO. T-1

1 OF 47

Plotted By: GRUB4113 Date: 18–Oct–18–16:31
File: X:\Projects\100054178 – LHC BSTC and 5 Tank Inspection 2017\Task 2 – Booster Station 1C\Sheets\100054178–T01.DWG

GENERAL NOTES

1. ALL WATER UTILITY CONSTRUCTION TO CONFORM TO AAC R18-5-502 AND AAC R18-4-119 WATER SYSTEM STANDARDS, ADEQ BULLETIN 10, LAKE HAVASU CITY STANDARDS AND SPECIFICATIONS, MARICOPA ASSOCIATION OF GOVERNMENTS (MAG) STANDARD SPECIFICATIONS (LATEST EDITION) AND DETAILS UNLESS SPECIFICALLY MODIFIED ON THE PLANS.
2. APPROVAL BY THE ENGINEER MEANS FOR GENERAL LAYOUT IN THE RIGHT-OF-WAY ONLY.
3. THE ENGINEER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY CONSTRUCTION.
4. ANY WORK PERFORMED WITHOUT THE KNOWLEDGE AND APPROVAL BY THE ENGINEER AND/OR ALL WORK MATERIAL NOT IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.
5. NO JOB WILL BE CONSIDERED COMPLETE UNTIL SITE IS CLEAN OF ALL DIRT AND DEBRIS.
6. THE CONTRACTOR SHALL KEEP SUITABLE EQUIPMENT ON HAND AT THE JOBSITE FOR MAINTENANCE DUST CONTROL, AND SHALL CONTROL DUST AS DIRECTED BY THE APPROPRIATE AGENCIES.
7. ALL QUANTITIES SHOWN ON PLANS ARE APPROXIMATE, ARE NOT VERIFIED BY THE ENGINEER, AND ARE FURNISHED SOLELY FOR THE CONTRACTOR'S CONVENIENCE. THEY DO NOT NECESSARILY CORRESPOND TO BID SCHEDULE ITEMS. PAYMENT WILL BE BASED ON BID SCHEDULE ITEMS. THE CONTRACTOR SHALL NOT BE RELIEVED OF HIS RESPONSIBILITY FOR INDEPENDENTLY ESTIMATING WORK QUANTITIES PRIOR TO BIDDING.
8. BACKFILL COMPACTION SHALL BE TYPE 1 (MAG 601) UNLESS OTHERWISE NOTED PER LHC STD DETAILS.
9. ALL PLANS, SIGNED BY THE DESIGN ENGINEER, ARE NULL AND VOID ONE YEAR FROM DATE OF SIGNATURE IF CONSTRUCTION HAS NOT STARTED.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING TO THE ENGINEER FOR APPROVAL, TRAFFIC CONTROL PLANS WHICH SHALL BE MADE A PART OF THE SUBMITTAL REVIEW REQUEST. THE CONTRACTOR SHALL DETERMINE THE EXACT SIGNING/TRAFFIC CONTROL DEVICES NECESSARY AND ALL TRAFFIC CONTROL WORK SHALL BE IN ACCORDANCE WITH MUTCD AND THE LATEST REVISIONS THEREOF. NO STREET IS TO BE CLOSED, RESTRICTED, OR CONSTRUCTED UPON UNTIL A TRAFFIC PLAN IS PREPARED BY THE CONTRACTOR AND SUBMITTED TO THE ENGINEER 1 WEEK IN ADVANCE FOR REVIEW. APPROPRIATE EMERGENCY AGENCIES SHALL BE NOTIFIED 24 HOURS PRIOR TO ANY CLOSING OF STREETS.
11. CONTRACTOR SHALL WARRANTY ALL WORK FOR A MINIMUM OF A ONE YEAR PERIOD.
12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN COPIES OF MAG AND THE CITY OF LAKE HAVASU STANDARDS, SPECIFICATIONS, AND DETAILS AS WELL AS ALL OTHER STANDARDS AND SPECIFICATIONS NECESSARY TO COMPLETELY AND ACCURATELY INTERPRET THESE PLANS.
13. REMOVAL OF STRUCTURES AND OBSTRUCTIONS AS NECESSARY TO COMPLETE THE WORK, OTHER THAN SPECIFICALLY SCHEDULED IN THE BID, IS INCIDENTAL TO THE CONTRACT. NO SEPARATE MEASUREMENT OF PAYMENT FOR UNSCHEDULED REMOVAL ITEMS WILL BE MADE.
14. CONSTRUCTION STAKING SHALL BE BY THE CONTRACTOR'S LICENSED SURVEYOR WITH CONTROL PROVIDED BY THE DESIGN ENGINEER WHO STAMPED THE PLANS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FOLLOW THE HORIZONTAL ALIGNMENT AND VERTICAL GRADES SHOWN IN THE PLANS, ANY CHANGES MUST BE APPROVED BY ENGINEER.
15. THE CITY OF LAKE HAVASU MAY ORDER ANY OR ALL WORKMANSHIP AND MATERIALS TO BE TESTED ACCORDING TO APPLICABLE STANDARDS.
16. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL REWORK AND/OR REMOVAL AND REPLACEMENT OF ALL MATERIALS AND/OR WORKMANSHIP REPRESENTED BY A FAILING TEST.
17. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL COSTS OF TESTING AND QUALITY CONTROL AS DELINEATED IN THE CITY'S PROJECT SPECIFICATIONS. THE COST OF TESTING IS INCIDENTAL TO EACH ITEM OF WORK. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE COST OF ANY CITY INSPECTION, AND TIME ASSOCIATED WITH, IF THE CONTRACTOR'S WORK IS BEING PERFORMED IN OVERTIME, AT NIGHT, OR ON WEEKENDS.
18. APPROVAL OF A PORTION OF THE WORK IN PROGRESS DOES NOT GUARANTEE ITS FINAL ACCEPTANCE. TESTING AND EVALUATION MAY CONTINUE UNTIL WRITTEN FINAL ACCEPTANCE OF A COMPLETE AND WORKABLE UNIT.
19. THE CITY OF LAKE HAVASU MAY SUSPEND THE WORK BY WRITTEN NOTICE WHEN, IN ITS JUDGEMENT, PROGRESS IS UNSATISFACTORY, WORK BEING DONE IS UNAUTHORIZED OR DEFECTIVE, WEATHER CONDITIONS ARE UNSUITABLE, OR THERE IS A DANGER TO THE PUBLIC HEALTH OR SAFETY.
20. STREET AND TRAFFIC SIGNS WILL BE RELOCATED BY THE CONTRACTOR. IF NECESSARY, ANY DIRECTION GIVEN BY THE CITY OF LAKE HAVASU SHALL BE INCIDENTAL.
21. CLEARING AND GRUBBING IS CONSIDERED INCIDENTAL TO THE WORK UNLESS SEPARATELY IDENTIFIED IN THE BID SCHEDULE. NO SEPARATE MEASUREMENT OF OR PAYMENT FOR CLEARING, GRUBBING, AND TREE REMOVAL WILL BE MADE. THE SITE OF ALL EXCAVATION, EMBANKMENTS, AND FILLS SHALL FIRST BE CLEARED OF STUMPS, TRASH, WEEDS, RUBBISH, AND LOOSE BOULDERS WHICH SHALL BE REMOVED AND DISPOSED OF. THE CONTRACTOR MUST SATISFY HIMSELF REGARDING THE CHARACTER AND AMOUNT OF LOAM, CLAY, SAND, QUICKSAND, HARDPAN, GRAVEL, ROCK, WATER, AND ALL OTHER MATERIAL TO BE ENCOUNTERED AND WORK TO BE PERFORMED.
22. EDGES OF CONCRETE TO HAVE A 3/4" CHAMFER, UNLESS OTHERWISE SPECIFIED ON PLANS.
23. CONCRETE SURFACES TO HAVE A BROOM FINISH UNLESS OTHERWISE NOTED ON THE PLANS.
24. ALL CONCRETE TO BE AT LEAST 4,000 P.S.I. TYPE V CLASS 'A' (MAG 725) PORTLAND CEMENT CONCRETE UNLESS OTHERWISE SPECIFIED ON PLANS.
25. THE LOCATIONS OF ALL EXISTING UTILITIES SHOWN ARE APPROXIMATE AND ARE BASED ON FIELD DATA AND MAP RECORDS. THE CONTRACTOR SHALL CONTACT ARIZONA 811 1-800 STAKE-IT PRIOR TO ANY CONSTRUCTION ACTIVITY TO VERIFY THE ACTUAL LOCATION OF ALL UTILITIES. CONTRACTOR SHALL DETERMINE WHICH UTILITIES DO NOT PARTICIPATE IN 1-800-STAKE-IT AND CONTACT THEM DIRECTLY TO VERIFY THE LOCATION OF THOSE UTILITIES. ANY DAMAGE TO EXISTING UTILITIES CAUSED BY CONTRACTOR'S OPERATION SHALL BE REPORTED TO THE UTILITY OWNER IMMEDIATELY AND REPAIRED OR REPLACED AT NO COST TO THE CITY. IN CASES WHEN THE EXISTING UTILITIES ARE NOT AS DEPICTED ON THE PLANS SOME MINOR DEVIATION TO THE PROPOSED ALIGNMENT MAY BE ALLOWED TO MAINTAIN MINIMUM SEPARATION DISTANCES BETWEEN UTILITIES. ANY PROPOSED CHANGES TO THE ALIGNMENT MUST BE SUBMITTED TO THE CITY'S REPRESENTATIVE FOR REVIEW. NO CHANGES WILL BE ALLOWED WITHOUT PRIOR APPROVAL.
26. IN ACCORDANCE WITH ARIZONA ADMINISTRATIVE CODE, SECTION R18-5-502, "MINIMUM DESIGN CRITERIA", EXTRA PROTECTION SHALL BE PROVIDED FOR GRAVITY SEWER LINES, FORCE MAIN SEWER LINES, REUSE FORCE MAINS, AND WATER LINES WHERE THE REQUIRED MINIMUM VERTICAL AND HORIZONTAL SEPARATION CAN NOT BE MAINTAINED. ENCASEMENT SHALL BE PROVIDED AS REQUIRED BY ADEQ AND SHALL CONFORM TO THE STANDARD DETAILS PROVIDED. REUSE LINES SHALL BE TREATED AS WATER LINES WHEN IN PROXIMITY TO SEWER LINES AND SHALL BE CONSIDERED SEWER LINES WHEN IN PROXIMITY TO WATER LINES.
27. THE CONTRACTOR SHALL LIMIT THE WORK AREA TO PUBLIC PROPERTY RIGHT-OF-WAY AND PERMANENT EASEMENTS AS SHOWN FOR CONSTRUCTION OF THE PROJECT. TEMPORARY CONSTRUCTION EASEMENTS EXIST AS SHOWN AND INDICATED IN THE PLANS.

GENERAL NOTES (CONT):

28. CONTRACTOR SHALL OBTAIN ANY ADDITIONAL TEMPORARY EASEMENTS OR USE AGREEMENTS THAT ARE DEEMED NECESSARY FOR CONSTRUCTION AT NO ADDITIONAL COST TO THE CITY. COPIES OF ALL CONTRACTOR OBTAINED EASEMENTS AND USE AGREEMENTS SHALL BE PROVIDED TO THE CITY'S REPRESENTATIVE PRIOR TO THE UTILIZATION OF THE SITE.
29. ALL EXISTING FLOW LINES AND PIPING LOCATIONS SHOWN ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY CONTRACTOR.
30. THE CONTRACTOR SHALL GRADE AND RESURFACE ALL AREAS DISTURBED BY CONSTRUCTION. IN ACCORDANCE WITH THE SPECIFICATIONS AND TO A CONDITION EQUAL TO, OR BETTER THAN, THE PRE-CONSTRUCTION CONDITION.
31. THE CONTRACTOR SHALL PROVIDE PROTECTION TO PREVENT UNDERMINING OR DAMAGING THE STRUCTURAL INTEGRITY OF EXISTING RESERVOIRS, ALL POWER POLES, FENCES, BLOCK WALLS, SCREEN WALLS, RETAINING WALLS, HIGHWAY AND STREET SIGNS, OTHER UTILITY POLES, OR OTHER PRIVATE OR PUBLIC IMPROVEMENTS WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE OWNING UTILITY AS NECESSARY TO PROVIDE TEMPORARY SUPPORT OR PROTECTION DURING CONSTRUCTION WORK, AND SHALL NEATLY REMOVE AND PROMPTLY REPLACE NON UTILITY IMPROVEMENTS WITHOUT UNDUE DISRUPTION. THE COST OF ALL SUCH PROTECTION, REMOVAL, AND REPLACEMENT REQUIRED TO COMPLETE THE PROJECT SHALL BE SUBSIDIARY TO OTHER BID ITEMS.
32. THE CONTRACTOR SHALL TAKE ALL APPROPRIATE STEPS TO MAINTAIN CONTINUOUS UTILITY SERVICE TO RESIDENTS AND BUSINESSES WITHIN THE PROJECT AREA. MANY EXISTING WATER AND GAS LINES ARE MORE THAN 30 YEARS OLD, PROPOSED METHOD OF CROSSING AND/OR SUPPORT OF UTILITIES SHALL BE APPROVED BY UTILITY OWNER IN ADVANCE OF WORK. MANY LOCAL WATER LINES ARE CONSTRUCTED OF ASBESTOS CEMENT. GAS LINES ARE REPORTED TO BE BRITTLE, SO CLOSE COORDINATION WITH THE UTILITY OWNER'S WILL BE NECESSARY TO AVOID DAMAGE. PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR.
33. ALL GRAVEL DRIVES AND GRAVEL ROADS DISTURBED DURING CONSTRUCTION SHALL BE REPLACED WITH A MINIMUM OF SIX INCHES (6") OF AGGREGATE BASE SURFACING AS SPECIFIED IN SECTION 02300 AND SHALL BE CONSIDERED SUBSIDIARY TO OTHER PAY ITEMS.
34. THE CONTRACTOR SHALL REMOVE ALL FENCING, ASPHALT AND CONCRETE ROADS AND DRIVEWAYS, CURB AND GUTTER, RIP-RAP, LANDSCAPING, DRAINAGE CULVERTS, LANDSCAPING AND ASSOCIATED APPURTENANCES AS REQUIRED FOR CONSTRUCTION PURPOSES. ALL ITEMS DAMAGED, REMOVED, OR DISTURBED SHALL BE RESTORED IN ACCORDANCE WITH THE SPECIFICATION TO A CONDITION EQUAL TO, OR BETTER THAN, THEIR CONDITION PRIOR TO THE START OF THE PROJECT. ITEMS OF WORK NOT SPECIFICALLY INCLUDED IN THE MEASUREMENTS AND PAYMENT SECTION OF THE SPECIFICATIONS SHALL BE CONSIDERED SUBSIDIARY TO OTHER BID ITEMS AND SHALL NOT BE PAID FOR SEPARATELY.
35. THE CONTRACTOR SHALL TAKE APPROPRIATE STEPS TO PREVENT EROSION OF MATERIAL FROM THE WORK AREA AND DEPOSITION OF SEDIMENTS INTO WATER COURSES OR DRAINAGE SWALES, THE CONTRACTOR SHALL SUBMIT AN EROSION CONTROL PLAN PRIOR TO THE START OF ANY EXCAVATION. ALL EROSION AND SEDIMENT CONTROL WORK SHALL BE INCIDENTAL TO OTHER PAY ITEMS.
36. SURVEYING PERFORMED BY:
ERIC T. PHAN R.L.S. 60371 EXP. SEPTEMBER 30 2021.
37. ALL STREET CENTERLINES HAVE EXISTING PINS AT THE INTERSECTION OF THE STREET CENTERLINES AND POINTS OF CURVATURE AND TANGENCY. WHERE PROPOSED WORK CONFLICTS WITH EXISTING PINS OR MONUMENTS, CONTRACTOR SHALL ARRANGE AND PAY FOR AN ARIZONA REGISTERED LAND SURVEYOR TO DETERMINE THE COORDINATES FOR EACH PIN PRIOR TO CONSTRUCTION AND TO REPLACE THE PINS WITH 4 ½" X ⅜" MAG NAIL WITH WASHER AND SURVEYOR INFORMATION STAMPED ON WASHER TO THE SAME LOCATION AFTER RESURFACING. ALL REQUIRED SURVEY WORK SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND WILL BE SUBSIDIARY TO OTHER PAY ITEMS. ALL EXISTING LAND SURVEY MONUMENTATION SHALL BE PROVIDED OR REPLACED BY A REGISTERED LAND SURVEYOR IF DAMAGED.
38. ALL REUSE AND WATER LINES SHALL BE PVC AWWA C-900 PIPE, UNLESS OTHERWISE NOTED ON PLANS.
39. LOCATION OF RIGHT-OF-WAY RELATIVE TO AERIAL PHOTOS INDICATED ON DRAWINGS MAY NOT MATCH FIELD CONDITIONS. AT ALL TIMES, CONTRACTOR SHALL MAINTAIN ADEQUATE REQUIRED MINIMUM SPACING FROM OTHER UTILITIES.
40. ANY ROCK ENCOUNTERED DURING EXCAVATION SHALL BE REMOVED AT NO ADDITIONAL COST TO LAKE HAVASU CITY. ROCK EXCAVATION COST SHALL BE INCIDENTAL TO OTHER ITEMS OF WORK.
41. ANY SHORING REQUIRED SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS OF WORK.
42. CONTRACTOR SHALL SCHEDULE WATER SHUTDOWNS AND SEWER WORK SO AS TO NOT DISRUPT SERVICE TO SCHOOLS, HOSPITALS, DAY CARE FACILITIES, ETC. IN ACCORDANCE WITH ARIZONA STATE LAW.
43. IT IS NOT THE INTENTION OF THE SPECIFICATIONS TO SUPERSEDE ANY FEDERAL, STATE OR LOCAL LAWS, REGULATIONS AND/OR ORDINANCES; THEY SHALL GOVERN IN ALL INSTANCES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SHOW A GOOD FAITH EFFORT AND TO PROTECT ALL EXISTING UTILITIES AND STRUCTURES AND TO ABIDE BY ALL FEDERAL, STATE AND LOCAL LAWS AND ORDINANCES IN THIS RESPECT.
44. PROPERTY LINES SHOWN ON DRAWINGS ARE APPROXIMATE.
45. CONTRACTOR SHALL VERIFY ALL QUANTITIES PRIOR TO CONSTRUCTION.
46. ALL VALVES SHALL BE ADJUSTED TO FINISH GRADE WITH CONCRETE COLLAR PER DETAIL 5, CD-3.
47. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED SHUT-DOWN ACTIVITIES WITH THE CITY. ALL REQUESTS SHALL BE WRITTEN AND SUBMITTED 2 WEEKS PRIOR TO THE PROPOSED SHUT-DOWN AND MEET REQUIREMENTS DEFINED IN THE SPECIFICATIONS.
48. EXISTING WATER MAIN AND APPURTENANCES TO BE REMOVED SHALL BE SALVAGED OR DISPOSED OF BY CONTRACTOR IN ACCORDANCE WITH SECTION 02050 OF THE PROJECT SPECIFICATIONS.
49. ALL DUCTILE IRON FITTINGS, JOINT RESTRAINTS, VALVES AND DUCTILE IRON PIPES LOCATED UNDERGROUND SHALL BE DOUBLE POLY WRAPPED AND TAPED.

GENERAL NOTES (CONT):

50. ALL LANDSCAPING DISTURBED SHALL BE REPLACED AT EQUAL OR BETTER CONDITION THAN EXISTING.
51. CONTRACTOR SHALL VERIFY AHEAD OF EXCAVATING THAT MINIMUM CLEARANCE IS AVAILABLE BETWEEN SEWER, LATERALS, WATER MAIN AND OTHER UTILITIES AND MAKE ADJUSTMENTS AS NEEDED. NO EXTRA PAYMENT SHALL BE MADE FOR EXTRA EXCAVATION, ADJUSTMENTS, LOWERINGS, ETC, NECESSARY FOR MAINTAINING PROPER SEPARATION FROM ANY UTILITY. THIS WORK SHALL BE INCIDENTAL TO INSTALLATION OF THE WATERLINE.
52. CONTRACTOR IS RESPONSIBLE FOR PIPE PROTECTION WHERE MINIMUM SEPARATION CANNOT BE MAINTAINED.
53. CONTRACTOR SHALL PROVIDE RESTRAINING DEVICES FOR DUCTILE IRON PIPE WHERE SHOWN ON PLANS.
54. CONTRACTOR SHALL PERFORM ALL TESTING AND DISINFECTING OF THE WATER LINES PER THE PROJECT SPECIFICATION 02666, AND THE ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY (ADEQ) REGULATIONS IN BULLETIN NO. 8.
55. ALL WATER MAINS SHALL BE BURIED WITH 12 GAUGE DIRECT BURY TRACE WIRE.
56. EXACT SLOPES FOR EXISTING PIPES ARE UNKNOWN. CONTRACTOR SHALL EXPOSE EXISTING PIPING AT EACH JOINT EITHER SIDE OF THE CONNECTION TO VERIFY THE LOCATION AND ELEVATION PRIOR TO ORDERING OR MANUFACTURING PIPE OR FITTINGS. THE CONTRACTOR SHALL PROVIDE THIS INFORMATION TO THE CITY FOR REVIEW AND MAKE NECESSARY ADJUSTMENTS IN PIPELINE LAYOUT, IF REQUIRED. THIS SHALL BE CONSIDERED DURING BID PROCESS AND NO ADDITIONAL PAYMENT WILL BE ALLOWED.
57. ALL PIPE, FITTINGS, FIRE HYDRANTS & OTHER APPURTENANCES IN DIRECT CONTACT WITH POTABLE WATER SHALL BE NATIONAL SANITATION FOUNDATION (NSF) 61 CERTIFIED.
58. PVC PIPE USED FOR WATER WORKS SHALL BEAR THE NSF SEAL FOR POTABLE WATER USE (NSF-PW).
59. PROJECT LOCATED ENTIRELY WITHIN FEMA ZONE X.
60. ALL WATER MAINS SHALL BE BURIED WITH WATER CAUTION TAPE.
61. THE PROJECT SPECIFICATION ADDRESSES PRESSURE TESTS, AND ALLOWABLE LEAKAGE AS A FUNCTION OF TEST PRESSURE AND PIPE DIAMETER PER AWWA C600.
62. ANY REUSABLE MATERIALS GENERATED DURING THE WORK, SUCH AS AGGREGATE, CRUSHED ROCK, TOPSOIL, SHALL BE SEGREGATED FROM OTHER WASTE MATERIALS AND BE STOCKPILED SO AS TO MAINTAIN SUITABILITY AND PERMIT REUSE.
63. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE SECURITY DURING CONSTRUCTION. SEE SUPPLEMENTAL TECHNICAL SPECIFICATION SECTION 01600

BASIS OF BEARING AND BENCHMARK

BASIS OF BEARING: NORTH 36°37'00" WEST. BEING THE BEARING OF THE CENTERLINE OF SCOUT DRIVE AS SHOWN ON RECORDED TRACT NO. 2273 RECEPTION NO. 72-8681 WITHIN THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 13 NORTH, RANGE 20 WEST.

BENCHMARK: 787.54 FEET (NAVD88) BENCHMARK SPIKE AND WASHER STAMPED "RLS 35546" AT THE CENTERLINE INTERSECTION OF WAR EAGLE DRIVE AND SCOUT DRIVE. LAKE HAVASU CITY, MOHAVE COUNTY, ARIZONA

REVISIONS:

LAKE HAVASU CITY

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ORIGINAL SCALE: 0 1" 2" 3" 4" INCHES

GENERAL NOTES

PROJECT: BOOSTER STATION 1C REPLACEMENT
LAKE HAVASU CITY, ARIZONA

DESIGNED BY: SBG/RAW
DRAWN BY: RAW

Registered Professional Engineer
CERTIFICATE NO.
42027
JONATHAN DANIEL
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ARIZONA U.S.A.
EXPIRES 3-31-2020

PROJECT NO.
WT7440

DWG NO.
G-1
2 OF 47

Plotted By: GRUB4113 Date: 18-Oct-18-16:31
File: X:\Projects\100054178 - LHC BS1C and 5 Tank Inspection 2017\Task 2 - Booster Station 1C\Sheets\100054178 1C G01.dwg

ABBREVIATIONS

Δ	DELTA
&	AND
ABAND, ABDN	ABANDON(ED)
ABS	AGGREGATE BASE SURFACE
AC	ASBESTOS CEMENT, ASPHALT CONCRETE
ACP	ASBESTOS CEMENT PIPE
ADEQ	ARIZONA DEPARTMENT OF ENVIRONMENTAL QUALITY
ADJ	ADJUSTABLE
ANG	ANGLE
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE
APPROX	APPROXIMATE
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AV	AIR VALVE
AVAR	AIR VACUUM AIR RELEASE
AWG	AMERICAN WIRE GAGE
AWWA	AMERICAN WATER WORKS ASSOCIATION
BA	BEARING AREA
BC	BEGIN CURVE
BF	BUTTERFLY
BLDG	BUILDING
BPS, BS	BOOSTER PUMP STATION, BOOSTER STATION
BO	BLOW-OFF
BOT	BOTTOM
BRZ	BRONZE
CAV	COMBINATION AIR/VACUUM VALVE
CF	CUBIC FEET
℄ CL	CENTERLINE
CL	CLASS
CLR	CLEAR
CML	CEMENT MORTAR LINED
CML&C	CEMENT MORTAR LINED AND COATED
CMU	CONCRETE MORTAR UNIT
CO	CLEAN OUT
CONC	CONCRETE
CONN	CONNECTION
CONT	CONTINUOUS
CORP	CORPORATION
CP	CATHODIC PROTECTION
CPTS	CATHODIC PROTECTION TEST STATION
CY	CUBIC YARD
DEMO	DEMOLISH
DET	DETAIL
DG	DECOMPOSED GRANITE
DI	DUCTILE IRON
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISCH	DISCHARGE
DIP	DUCTILE IRON PIPE
DWG	DRAWING
DWV	DRAIN WASTE VENT
E	EASTING
EC	END CURVE
EG	EXISTING GRADE
EL, ELEV	ELEVATION
ELEC	ELECTRIC, ELECTRICAL
EMERG	EMERGENCY
EQ	EQUAL
EXIST	EXISTING
F	FEMALE
FAB	FABRICATED
FB	FREEBOARD
FG	FINISH GRADE
FH	FIRE HYDRANT
FIPT	FEMALE IRON PIPE THREAD
FL	FLOWLINE
FLG	FLANGE
FRP	FIBERGLASS REINFORCED PLASTIC
FT	FEET
FTG	FOOTING
FTGS	FITTINGS
FUT	FUTURE
G	GAS
GA	GAGE
GALV	GALVANIZED
GEN	GENERATOR
GV	GATE VALVE
HDWL	HEADWALL
HMWPE	HIGH MOLECULAR WEIGHT POLYETHYLENE
HORIZ	HORIZONTAL
HP	HORSEPOWER, HIGH POINT
HWL	HIGH WATER LEVEL
IDENTIF	IDENTIFICATION
IE	INVERT ELEVATION
IN	INCH
INVT	INVERT
IPT	IRON PIPE THREAD
JTS	JOINTS
L	LENGTH
LB	POUND
LF	LINEAR FEET
M	MALE
MAG	MARICOPA ASSOCIATION OF GOVERNMENTS, MAGNESIUM
MAX	MAXIMUM
MFR	MANUFACTURER
MG	MILLION GALLON
MJ	MECHANICAL JOINT
MIN	MINIMUM
MIPT	MALE IRON PIPE THREAD
MOA	MACHINED OVER ALL
MOD	MODIFIED
N	NORTHING
NIC	NOT IN CONTRACT
NO.	NUMBER
OC	ON CENTER
OD	OUTSIDE DIAMETER
OF	OVERFLOW
OHE	OVERHEAD ELECTRIC
OPR	OPERATOR
P&ID	PROCESS AND INSTRUMENTATION DIAGRAM
PCC	POINT OF COMPOUND CURVE
PE	PLAIN END
PI	POINT OF INTERSECTION
ℙ	PROPERTY LINE
PLCS	PLACES
PO	PUSH-ON
POC	POINT OF CONNECTION
PP	POWER POLE
PPLN	PIPELINE
PS	PUMP STATION
PSI	POUNDS PER SQUARE INCH
PT	POINT
PUE	PUBLIC UTILITY EASEMENT
PVC	POLYVINYL CHLORIDE
PVMT	PAVEMENT
R	RADIUS
RCP	REINFORCED CONCRETE PIPE
RDCR, RED	REDUCER
REQD	REQUIRED
RSVR	RESERVOIR
ROW, R/W	RIGHT-OF-WAY
S	SOUTH, SLOPE, SEWER
SCHED	SCHEDULE
SD	STORM DRAIN
SF	SQUARE FEET
SHT	SHEET
SIM	SIMILAR
SLP	SLOPE
SPEC	SPECIFICATION(S)
SPRT	SUPPORT
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STL	STEEL
t	THICKNESS
T	TELEPHONE
TEMP	TEMPORARY
TG	TOP OF GRATE
THD	THREAD
THHN	THERMOPLASTIC HIGH HEAT-RESISTANT NYLON-COATED
THK, THKNS	THICK, THICKNESS
THWN	THERMOPLASTIC HEAT AND WATER-RESISTANT NYLON-COATED
TOT	TOTAL
TP	TOP OF PIPE
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC (ELECTRICAL)
V	VALVE
VAC	VACUUM
VERT	VERTICAL
W/	WITH
W	WATER
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
XFMR	TRANSFORMER
YR	YEAR

LEGEND:

EXISTING CONDITIONS:

LINE / SYMBOL	DESCRIPTION
ℙ ROW	PROPERTY LINE / RIGHT-OF-WAY
780	MAJOR CONTOUR
	MINOR CONTOUR
T	EXISTING UNDERGROUND TELEPHONE
E	EXISTING UNDERGROUND ELECTRICAL
OHE	EXISTING OVERHEAD ELECTRICAL
W	EXISTING WATER PIPELINE
	EXISTING YARD PIPING
G	EXISTING GAS
	EXISTING WATER VALVE
X X X X	EXISTING FENCE
	EXISTING POWER POLE
772.3	EXISTING SPOT ELEVATION

PROPOSED IMPROVEMENTS:

LINE / SYMBOL	DESCRIPTION
775	MAJOR CONTOUR
	MINOR CONTOUR
	DAYLIGHT LINE
	PIPE (BELOW GRADE)
	PIPE (ABOVE GRADE)
UGE	UNDERGROUND ELECTRICAL
OH	OVERHEAD ELECTRICAL
	POWER POLE
	ANTENNA
	DRAIN INLET
	GRADED SWALE
	CONCRETE SWALE
	AGGREGATE BASE
	GATE VALVE
	BUTTERFLY VALVE
AV	AIR VALVE
BO	BLOW-OFF
CP	CATHODIC PROTECTION TEST STATION
	FENCE
764.29	PROPOSED ELEVATION
X SECTION LETTER	SECTION CUT
DETAIL NUMBER OR SECTION LETTER; TITLE SCALE: NTS; X-X; X-X; SHEET WHERE DRAWN, CUT, OR CALLED OUT	DETAIL TITLE BLOCK

STANDARDS

(SEE DWG G-5)

BOLLARD	MAG 140
BLOCKING FOR GATE & BF WATER VALVES	MAG 301
CONCRETE METER BOX	MAG 320
THRUST BLOCKS FOR WATER LINES	MAG 380
HEADWALL	MAG 501-1
CONC PIPE COLLAR	MAG 505
CATCH BASIN TYPE 'G'	MAG 537
EROSION PROTECTION / GABIONS	MAG 555
UNISOURCE DISTRIBUTION PRIMARY AND SECONDARY TRENCH DETAIL	J
UNISOURCE TRANSFORMER PAD 3PH, 750 KVA THROUGH 2500 KVA	U-1

SURVEY/TOPO CONTROL

DATUM: NAVD88 BASED ON STATIC GPS OBSERVATION

BASIS OF BEARINGS: STATE PLANE COORDINATE SYSTEM ARIZONA WEST NORTH 36°37'00" WEST. BEING THE BEARING OF THE CENTERLINE OF SCOUT DRIVE AS SHOWN ON RECORDED TRACT NO. 2273 RECEPTION NO. 72-8681 WITHIN THE SOUTHEAST QUARTER (SE 1/4) OF SECTION 13, TOWNSHIP 13 NORTH, RANGE 20 WEST.

PROJECT BENCHMARK: 787.54 FEET (NAVD88) BENCHMARK SPIKE AND WASHER STAMPED "RLS 35546" AT THE CENTERLINE INTERSECTION OF WAR EAGLE DRIVE AND SCOUT DRIVE. LAKE HAVASU CITY, MOHAVE COUNTY, ARIZONA

DATE OF SURVEY: MARCH 12, 2017

RECORD DRAWINGS

1. LAKE HAVASU IRRIGATIONS AND DRAINAGE DISTRICT, PROJECT NO. W107-31 "WATER IMPROVEMENTS SOUTH SYSTEM" PLAN NO. 2689/0351 DATED AUG. 1980.

REVISIONS:

LAKE HAVASU CITY

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ORIGINAL SCALE: 0 1 INCHES 2 3 4

ABBREVIATIONS AND LEGEND

PROJECT: BOOSTER STATION 1C REPLACEMENT
LAKE HAVASU CITY, ARIZONA

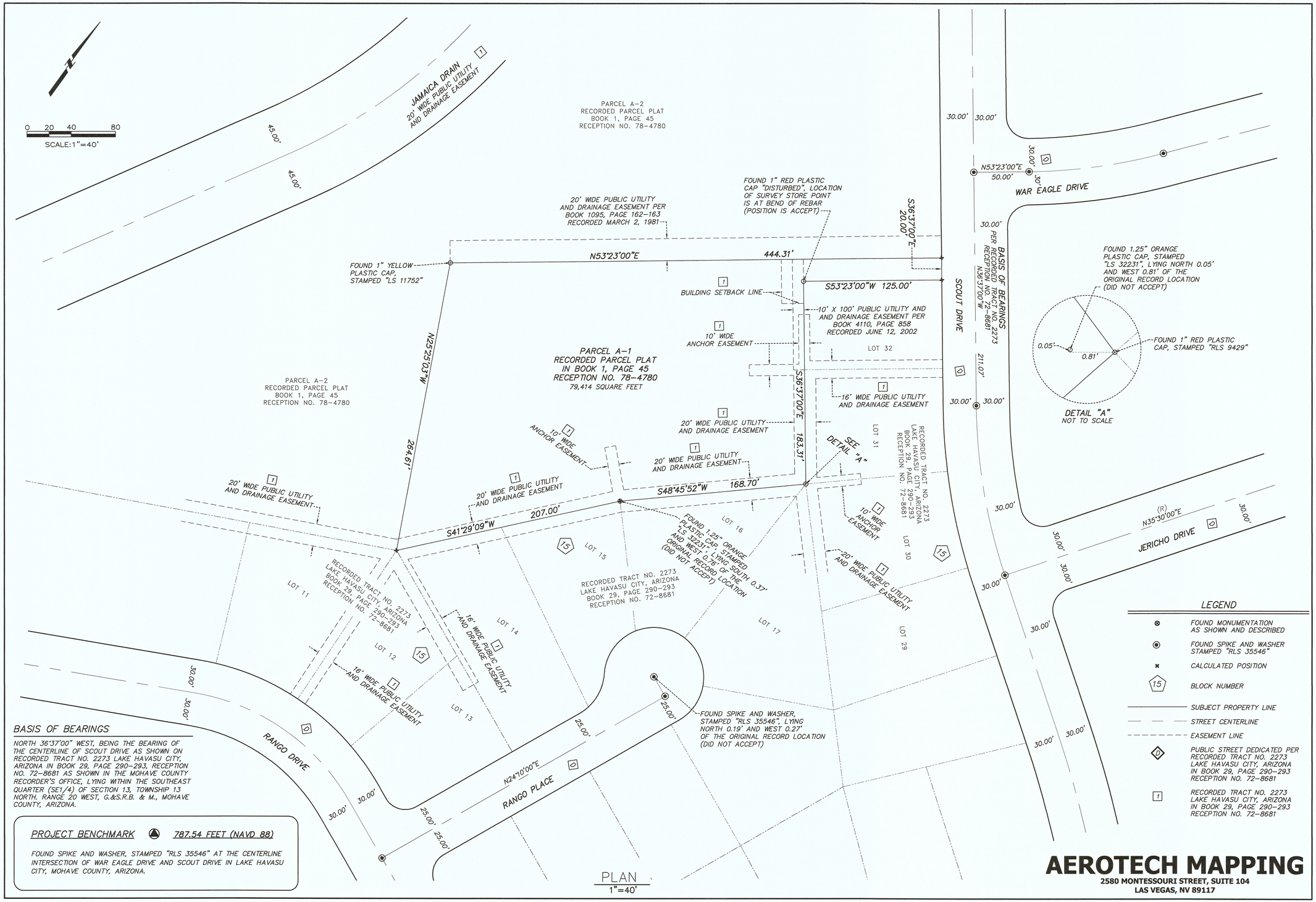
DESIGNED BY: SBG/RAW
DRAWN BY: RAW

EXPIRES 3-31-2020

PROJECT NO.
WT7440

DWG NO.
G-2
3 OF 47

Plotted By: CORD5148 Date: 1-Mar-19 10:58
File: X:\Projects\100054178 - LHC BS1C and 5 Tank Inspection 2017\Task 2 - Booster Station 1C\Sheets\100054178 1C G02.dwg



BASIS OF BEARINGS

NORTH 36°37'00" WEST, BEING THE BEARING OF THE CENTERLINE OF SCOUT DRIVE AS SHOWN ON RECORDED TRACT NO. 2273 LAKE HAVASU CITY, ARIZONA IN BOOK 29, PAGE 290–293, RECEPTION NO. 72–8681 AS SHOWN IN THE MOHAVE COUNTY RECORDER'S OFFICE, LYING WITHIN THE SOUTHEAST QUARTER (SE1/4) OF SECTION 13, TOWNSHIP 13 NORTH, RANGE 20 WEST, G.&S.R.B. & M., MOHAVE COUNTY, ARIZONA.

PROJECT BENCHMARK ▲ 787.54 FEET (NAVD 88)

FOUND SPIKE AND WASHER, STAMPED "RLS 35546" AT THE CENTERLINE INTERSECTION OF WAR EAGLE DRIVE AND SCOUT DRIVE IN LAKE HAVASU CITY, MOHAVE COUNTY, ARIZONA.

PLAN
1"=40'

AEROTECH MAPPING
2580 MONTESSOURI STREET, SUITE 104
LAS VEGAS, NV 89117

REVISIONS:

LAKE HAVASU CITY

ORIGINAL SCALE: 0 1 2 3 4 INCHES

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SITE PROPERTY/EASEMENT CONTROL PLAN

PROJECT: BOOSTER STATION 1C REPLACEMENT
LAKE HAVASU CITY, ARIZONA

DESIGNED BY: ATM
DRAWN BY: AR

REGISTERED LAND SURVEYOR
60371
ERIC T. PHAN
DATE SIGNED 04/24/18
ARIZONA U.S.A.

PROJECT NO.
WT7440

DWG NO.
G-3
4 OF 47

Plotted By: tull7841 Date: 6-Apr-18 - 09:07
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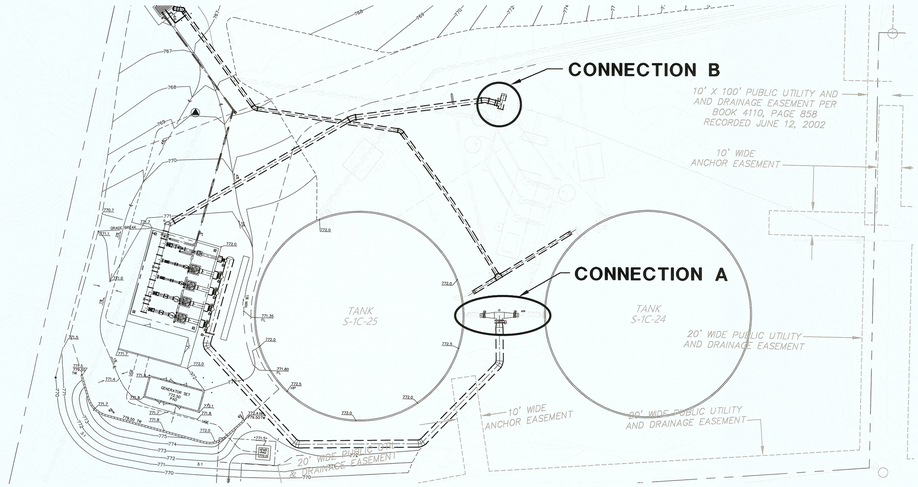
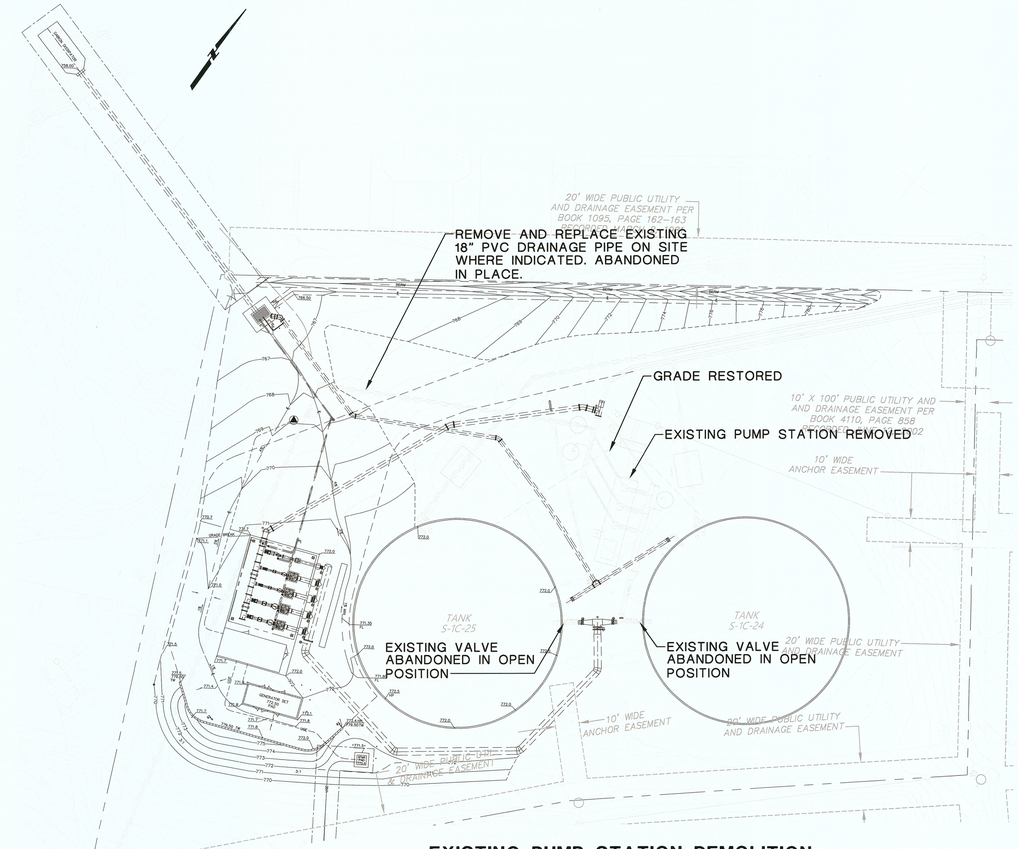


INLET/OUTLET CONNECTION TIE-INS

PHASE 1

1"=30'



EXISTING PUMP STATION DEMOLITION

PHASE 3

1"=30'

PUMP STATION CONSTRUCTION

PHASE 2

1"=30'

NOTE:
CONTRACTOR TO REFER TO "RECORD DRAWINGS" SHEET G-2 FOR AVAILABLE EXISTING IMPROVEMENT PLANS FOR FACILITY DEMOLITION PLANNING PURPOSES.

PHASE 1 NOTES:

1. EACH OF THE SHUTDOWNS FOR CONNECTIONS A AND B SHALL BE IMPLEMENTED AS INDEPENDENT LIMITED TIMEFRAME EVENTS IMPACTING OPERATIONS NO MORE THAN FIVE (5) HOURS TOTAL EACH SHUTDOWN. CITY WILL VERIFY OPERATION OF VALVES, AVARS, HYDRANTS AND OTHER APPURTENANCES PRIOR TO SHUTDOWN.
2. INSTALL CONNECTION "A" ON EXISTING 18" CML&C STEEL INTERCONNECT LINE. 30" BUTTERFLY VALVE TO REMAIN CLOSED WITH TEMPORARY BLIND FLANGED INSTALLED.
3. INSTALL CONNECTION "B" ON EXISTING 24" CML&C STEEL DISCHARGE LINE. 24" BUTTERFLY VALVE TO REMAIN CLOSED WITH TEMPORARY BLIND FLANGE INSTALLED.

PHASE 2 NOTES:

1. CONSTRUCT NEW BS1C PUMP STATION: ITEMS SHALL INCLUDE:
   - GRADING
   - SUCTION AND DISCHARGE PIPING
   - PUMP STATION
   - ELECTRICAL SERVICE
   - ADDITIONAL PIPING SHOWN ON PLANS
   - SUCCESSFULLY COMPLETE STARTUP OF NEW BS1C PUMP STATION

PHASE 3 NOTES:

1. INSTALL BLIND FLANGES TO ISOLATE EXISTING PUMP STATION PIPING AT CONNECTION A AND B.
2. DEMOLISH EXISTING PUMP STATION, ITEMS SHALL INCLUDE:
   - ISOLATION OF EXISTING OVERFLOW PIPING AS NOTED IN PLANS.
   - DEMOLITION OF PUMP STATION, ELECTRICAL AND SITE APPURTENANCES AS NOTED ON PLANS.
3. COMPLETE INSTALLATION OF REPLACEMENT 18" PVC TANK OVERFLOW DRAIN LINE WHERE INDICATED.
4. ABANDON EXISTING 18" VALVES IN PLACE IN OPEN POSITION AT CONNECTION A.

0 30 60 90
SCALE: 1" = 30'

REVISIONS:

LAKE HAVASU CITY

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ORIGINAL SCALE: 0 1 2 3 4 INCHES

CONSTRUCTION PHASING PLAN

PROJECT: BOOSTER STATION 1C REPLACEMENT
LAKE HAVASU CITY, ARIZONA

DESIGNED BY: SBG/RAW
DRAWN BY: RAW

Registered Professional Engineer (Civil) CERTIFICATE NO. 42027 JONATHAN DANIEL TULL Date Signed 10-25-18 ARIZONA U.S.A.
EXPIRES 3-31-2020

PROJECT NO. WT7440

DWG NO. G-4
5 OF 47

Plotted By: GRUBA113 Date: 18-Oct-18 16:32
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